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(to be used for all correspondence after initial filing)

Application Number	Patent#: 7050489
Filing Date	Issued: May 23, 2006
First Named Inventor	Frank Sjöberg et al.
Art Unit	2637
Examiner Name	Young T. Tse
Attorney Docket Number	S1022.80668US00

Total Number of Pages in This Submission 13

ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input checked="" type="checkbox"/> Copy of Original Transmittal Letter	<input type="checkbox"/> Terminal Disclaimer	<input type="checkbox"/> Other Enclosure(s) (please identify below):
<input checked="" type="checkbox"/> Request for Certificate of Correction	<input type="checkbox"/> Request for Refund	
<input checked="" type="checkbox"/> Certificate of Correction	<input type="checkbox"/> CD, Number of CD(s) _____	
<input checked="" type="checkbox"/> Copy of Title Page of U.S. Patent No. 7,050,489	<input type="checkbox"/> Landscape Table on CD	
<input checked="" type="checkbox"/> Copy of Declaration and Power of Attorney		
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		

Remarks

Certificate
JUN 08 2006
of Correction

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	WOLF, GREENFIELD & SACKS, P.C.		
Signature	<i>William R. McClellan</i>		
Printed name	William R. McClellan		
Date	May 31, 2006	Reg. No.	29,409

Certificate of Mailing Under 37 CFR 1.8(a)

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as First Class Mail, in an envelope addressed to: Attention: Certificate of Correction Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: May 31, 2006

Signature: *Doris A. Champagne* (Doris A. Champagne)

JUN 3 2006



Docket No.: S1022.80668US00
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Frank Sjöberg; Sarah Kate Wilson, Rickard Nilsson, Daniel Bengtsson,
Mikael Isaksson; Tomas Nordström; Per Odling; Gunnar Bahlenberg;
Magnus Johansson; Lennart Olsson; Sven-Göran Ökvist
Serial No.: 09/856438
Confirmation No.: 8286
Filed: May 21, 2001
Patent No.: 7050489
For: IMPROVEMENTS IN, OR RELATING TO, VDSL TRANSMISSION
SYSTEMS

Examiner: Young T. Tse
Art Unit: 2637

Certificate of Mailing Under 37 CFR 1.8(a)

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as First Class Mail, in an envelope addressed to: Attention: Certificate of Correction Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: May 31, 2006

Doris A. Champagne
Doris A. Champagne

**REQUEST FOR CERTIFICATE OF CORRECTION
PURSUANT TO 37 CFR 1.322**

Attention: Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Upon reviewing the above-identified patent, Patentee noted typographical errors which should be corrected.

On the title page, item (86), the application number of the PCT application is incorrect. As shown in the Declaration and Power of Attorney, in the prior foreign application section, and on the original transmittal letter to the Patent Office, the application should be -- PCT/SE99/02116--and not "PCT/SE33/02116" as it appears on the title page of issued U.S. Patent No. 7,050,489.

On the title page, in the inventors section, the address of one of the inventors is incorrect. Sarah Kate Wilson, is a U.S. citizen and her address is 500 7th Ave, Menlo Park, CA 94025.

Accordingly, item (75) on the title page should read:

(75) Inventors: Frank Sjöberg; Luleå, (SE);
Sarah Kate Wilson, CA (US)
Rickard Nilsson, Luleå, (SE);
Daniel Bengtsson, Luleå, (SE);
Mikael Isaksson; Luleå, (SE);
Tomas Nordström; Luleå, (SE);
Per Odling; Luleå, (SE);
Gunnar Bahlenberg; Luleå, (SE);
Magnus Johansson; Luleå, (SE);
Lennart Olsson; Luleå, (SE);
Sven-Göran Ökvist; Luleå, (SE)

Ms. Wilson's address was listed as Luleå, Sweden on the Declaration as sent to Ms. Wilson. However, Ms. Wilson corrected the address on the Declaration prior to filing the document in the Patent Office. The Declaration as filed listed Ms. Wilson's address as: 500 7th Ave, Menlo Park, CA 94025; accordingly patentees believe no fee is required. However, if the Examiner deems a fee to be necessary, such fee may be charged to the deposit account of the undersigned, Deposit Account No. 23/2825.

Transmitted herewith is a proposed Certificate of Correction effecting such amendment. Patentee respectfully solicits the granting of the requested Certificate of Correction.

Dated: May 31, 2006

Respectfully submitted;

By: William R. McClellan
William R. McClellan
Registration No.: 29,409
WOLF, GREENFIELD & SACKS, P.C.
Federal Reserve Plaza
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**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

Page 1 of 1

PATENT NO. : 7050489
APPLICATION NO. : 09/856438
ISSUE DATE : May 23, 2006
INVENTOR(S) : Frank Sjöberg; Sarah Kate Wilson, Rickard Nilsson, Daniel Bengtsson,
Mikael Isaksson; Tomas Nordström; Per Ödling; Gunnar Bahlenberg;
Magnus Johansson; Lennart Olsson; Sven-Göran Ökvist

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the title page, item (75) should read:

(75) Inventors: Frank Sjöberg; Luleå, (SE);
Sarah Kate Wilson, CA (US)
Rickard Nilsson, Luleå, (SE);
Daniel Bengtsson, Luleå, (SE);
Mikael Isaksson; Luleå, (SE);
Tomas Nordström; Luleå, (SE);
Per Ödling; Luleå, (SE);
Gunnar Bahlenberg; Luleå, (SE);
Magnus Johansson; Luleå, (SE);
Lennart Olsson; Luleå, (SE);
Sven-Göran Ökvist; Luleå, (SE)

On the title page, item (86) should read:

(86) PCT No.: PCT/SE99/02116

MAILING ADDRESS OF SENDER (Please do not use customer number below):

William R. McClellan
WOLF, GREENFIELD & SACKS, P.C.
Federal Reserve Plaza
600 Atlantic Avenue
Boston, Massachusetts 02210-2206

JUN 9 2006



US007050489B1

(12) **United States Patent**
Sjöberg et al.

(10) **Patent No.:** **US 7,050,489 B1**
(45) **Date of Patent:** **May 23, 2006**

(54) **VDSL TRANSMISSION SYSTEMS**

(75) **Inventors:** **Frank Sjöberg**, Luleå (SE); **Sarah Kate Wilson**, Luleå (SE); **Rickard Nilsson**, Luleå (SE); **Daniel Bengtsson**, Luleå (SE); **Mikael Isaksson**, Luleå (SE); **Tomas Nordström**, Luleå (SE); **Per Ödling**, Luleå (SE); **Gunnar Bahlenberg**, Luleå (SE); **Magnus Johansson**, Luleå (SE); **Lennart Olsson**, Luleå (SE); **Sven-Göran Ökvist**, Luleå (SE)

(73) **Assignee:** **STMicroelectronics NV**, Amsterdam (NL)

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) **Appl. No.:** **09/856,438**

(22) **PCT Filed:** **Nov. 18, 1999**

(86) **PCT No.:** **PCT/SE33/02116**

§ 371 (c)(1),
(2), (4) **Date:** **May 21, 2001**

(87) **PCT Pub. No.:** **WO00/31890**

PCT Pub. Date: **Jun. 2, 2000**

(30) **Foreign Application Priority Data**

Nov. 21, 1998 (SE) 9804021
Mar. 5, 1999 (SE) 9900788

(51) **Int. Cl.**
H04B 1/38 (2006.01)

(52) **U.S. Cl.** 375/222

(58) **Field of Classification Search** 375/225,
375/222, 227, 228, 288, 219, 220, 377; 370/201
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,887,032 A 3/1999 Cioffi
6,647,058 B1 * 11/2003 Bremer et al. 375/222

FOREIGN PATENT DOCUMENTS

WO WO 9923764 A1 5/1999

* cited by examiner

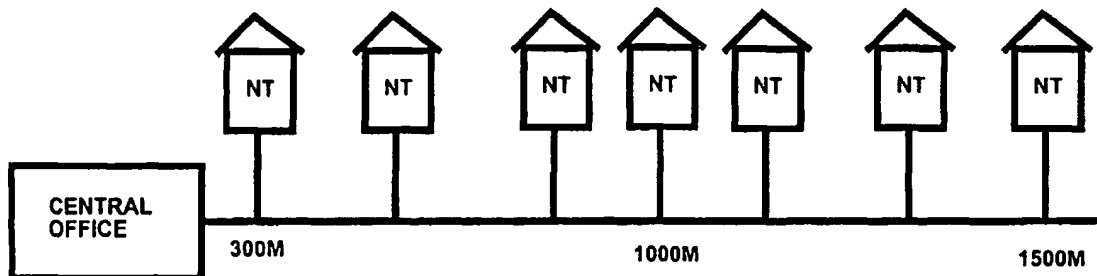
Primary Examiner—Young T. Tse

(74) *Attorney, Agent, or Firm*—Lisa K. Jorgenson; William R. McClellan; Wolf, Greenfield & Sacks, P.C.

(57) **ABSTRACT**

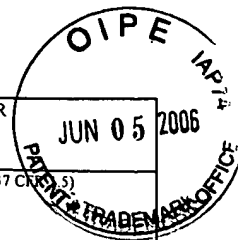
One problem, frequently encountered with VDSL transmission systems, is that upstream FEXT produced by system users having short wires can be very strong. Users having shorter wires get high bit rates whereas users having longer wires get low bit rates. In extreme cases it may happen that users with wire lengths greater than 1000 meter cannot transmit data upstream. The present invention provides a VDSL transmission system with a plurality of modems. The modems are located at varying distances from a central station. There is a target bit rate for each modem. That modems on shorter wires have control means for reducing their transmit power. This reduces the FEXT produced by these modems enabling modems on longer wires to transmit at higher bit rates.

35 Claims, 2 Drawing Sheets



9 2006

FORM PTO-1390 (REV. 10-2000)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTORNEY'S DOCKET NUMBER S1022/8668	
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371				U.S. APPLICATION NO. (If known, see 37 C.F.R. 1.51)	
INTERNATIONAL APPLICATION NO. PCT/SE99/02116		INTERNATIONAL FILING DATE 18 November 1999		PRIORITY DATE CLAIMED 21 November 1998 5 March 1999	
TITLE OF INVENTION IMPROVEMENTS IN, OR RELATING TO, VDSL TRANSMISSION SYSTEMS					
APPLICANT(S) FOR DO/EO/US SJÖBERG, Franck, WILSON, Sarah Kate, NILSSON, Rikard, BENGTTSSON, Daniel, ISAKSSON, Mikael, NORDSTROM, Tomas, ÖDLING, Per, BAHLENBERG, Gunnar, JOHANSSON, Magnus, OLSSON Lennart, OKVIST, Sven-Göran					
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:					
<ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371. 2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371. 3. <input type="checkbox"/> This is an express request to promptly begin national examination procedures (35 U.S.C. 371(f)). 4. <input type="checkbox"/> The US has been elected by the expiration of 19 months from the earliest claimed priority date (PCT Article 31). 5. <input type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)). <ol style="list-style-type: none"> a. <input type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau). b. <input type="checkbox"/> has been transmitted by the International Bureau. c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US). 6. <input checked="" type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)). <ol style="list-style-type: none"> a. <input checked="" type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau). b. <input type="checkbox"/> has been transmitted by the International Bureau. 7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)). <ol style="list-style-type: none"> a. <input type="checkbox"/> are attached hereto (required only if not transmitted by the International Bureau). b. <input type="checkbox"/> have been communicated by the International Bureau. c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired. d. <input type="checkbox"/> have not been made and will not be made. 8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)). 9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). 10. <input type="checkbox"/> An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(C)(5)). 					
<p>Items 11. To 16. Below concern document(s) or information included:</p> <p>An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</p> <p><input checked="" type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</p> <p><input checked="" type="checkbox"/> A FIRST preliminary amendment.</p> <p>A SECOND or SUBSEQUENT preliminary amendment.</p> <p>A substitute specification.</p> <p>A change of power of attorney and/or address letter.</p> <p>A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821-1.825.</p> <p>A second copy of the published international application under 35 U.S.C. 154(d)(4).</p> <p>19. A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</p> <p>20. Other items or information: Title page of WO 00/31890</p>					
<p>Pres Mail Label No. EL840396842US</p> <p>Date Mailed: May 21, 2001</p>					





Declaration and Power of Attorney for Patent Application

Déclaration et Pouvoirs pour Demande de Brevet

French Language Declaration

En tant que l'inventeur nommé ci-après, je déclare par le présent acte que:

Mon domicile, mon adresse postale, et ma nationalité sont ceux figurant ci-dessous à côté de mon nom.

Je crois être le premier inventeur original et unique (si un seul nom est mentionné ci-dessous), ou l'un des premiers co-inventeurs originaux (si plusieurs noms sont mentionnés ci-dessous) de l'objet revendiqué, pour lequel une demande de brevet a été déposée concernant l'invention intitulée:

IMPROVEMENTS IN, OR RELATING TO, VDSL TRANSMISSION SYSTEMS

et dont la description est fournie ci-joint à moins que la case suivante n'ait été cochée:



a été déposée le sous le
numéro de demande des Etats-Unis ou le numéro de
demande international



les spécifications portant le dossier de l'avocat
numéro _____

et modifiée le _____
(le cas échéant).

Je déclare par le présent acte avoir passé en revue et compris le contenu de la description ci-dessus, revendications comprises, telles que modifiées par toute modification dont il aura été fait référence ci-dessus.

Je reconnais devoir divulguer toute information pertinente à la brevetabilité, comme défini dans le Titre 37, §1.56 du Code fédéral des réglementations.

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

IMPROVEMENTS IN, OR RELATING TO, VDSL TRANSMISSION SYSTEMS

the specification of which is attached hereto unless one of the following boxes is checked:



was filed on
as United States Application Number or International
Number



the specification of which bears attorney
docket No. _____

and was amended on _____
(if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

French Language Declaration

Je revendique par le présent acte avoir la priorité étrangère, en vertu du Titre 35, § 119(a)-(d) ou § 365(b) du Code des Etats-Unis, sur toute demande étrangère de brevet ou certificat d'inventeur ou, en vertu du Titre 35, § 365(a) du même Code, sur toute demande internationale PCT désignant au moins un pays autre que les Etats-Unis et figurant ci-dessous et, en cochant la case, j'ai aussi indiqué ci-dessous toute demande étrangère de brevet, tout certificat d'inventeur ou toute demande internationale PCT ayant une date de dépôt précédant celle de la demande à propos de laquelle une priorité est revendiquée.

Prior foreign application(s)

Demande(s) de brevet antérieure(s)

PCT/SE99/02116

PCT

(Number)

(Country)

(Numéro)

(Pays)

9900788-2

SWEDEN

(Number)

(Country)

(Numéro)

(Pays)

9804021-5

SWEDEN

(Number)

(Country)

(Numéro)

(Pays)

Je revendique par le présent acte tout bénéfice, en vertu du Titre 35 § 119(e) du Code des Etats-Unis, de toute demande de brevet provisoire effectuée aux Etats-Unis et figurant ci-dessous.

(Application No.)
(N° de demande)

(Filing Date)
(Date de dépôt)

(Application No.)
(N° de demande)

(Filing Date)
(Date de dépôt)

Je revendique par le présent acte, le bénéfice, en vertu du Titre 35 § 120 du Code des Etats-Unis, de toute demande de brevet effectuée aux Etats-Unis, ou en vertu du Titre 35, § 365(c) du même Code, de toute demande internationale PCT désignant les Etats-Unis et figurant ci-dessous et, dans la mesure où l'objet de chacune des revendications de cette demande de brevet n'est pas divulgué dans la demande antérieure américaine ou internationale PCT, en vertu des dispositions du premier paragraphe du Titre 35, § 112 du Code des Etats-Unis, je reconnais devoir divulguer toute information pertinente à la brevetabilité, comme défini dans le Titre 37, § 1.56 du Code Fédéral des réglementations, dont j'ai pu disposer entre la date de dépôt de la demande antérieure et la date de dépôt de la demande nationale ou internationale PCT de la présente demande:

(Application No.)
(N° de Demande)

(Filing Date)
(Date de Dépôt)

(Application No.)
(N° de Demande)

(Filing Date)
(Date de Dépôt)

Je déclare par le présent acte que toute déclaration ci-incluse est, à ma connaissance, véridique et que toute déclaration formulée à partir de renseignements ou de suppositions est tenue pour véridique; et de plus, que toutes ces déclarations ont été formulées en sachant que toute fausse déclaration volontaire ou son équivalent est passible d'une amende ou d'une incarcération, ou des deux, en vertu de la Section 1001 du Titre 18 du Code des Etats-Unis, et que de telles déclarations volontairement fausses risquent de compromettre la validité de la demande de brevet ou du brevet délivré à partir de celle-ci.

I hereby claim foreign priority under Title 35, United States Code, § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States, listed below, and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed:

Priority not claimed

Droit de priorité non revendiqué

18 NOVEMBER 1999

(Day/Month/Year Filed)

(Jour/Mois/Année de dépôt)

☐

5 MARCH 1999

(Day/Month/Year Filed)

(Jour/Mois/Année de dépôt)

☐

21 NOVEMBER 1998

(Day/Month/Year Filed)

(Jour/Mois/Année de dépôt)

☐

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below.

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) or § 365(c) of any PCT international application(s) designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

(Status)(Patented, pending abandoned)
(Statut)(breveté, en cours d'examen, abandonné)

(Status)(Patented, pending abandoned)
(Statut)(breveté, en cours d'examen, abandonné)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2006

French Language Declaration

POUVOIR: En tant que l'inventeur cité, je désigne par la présente l'(les) avocat(s) et/ou agent(s) suivant(s) pour qu'il(s) poursuive(nt) la procédure de cette demande de brevet et traite(nt) toute affaire s'y rapportant avec l'Office des brevets et des marques: (mentionner le nom et le numéro d'enregistrement).

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (list name and registration number)

David Wolf	17,528	Peter C. Lando	34,654	Paul D. Sorokin	40,212	Stephen R. Finch	42,534
George L. Greenfield	17,756	Gary S. Engelson	35,128	John R. Van-Amsterdam	33,228	Joseph Teja, Jr.	45,157
Stanley Sacks	19,900	Peter J. Gordon	35,164	Matthew B. Lowrie	36,904	Jeffrey B. Powers	45,021
Edward F. Pedman	28,105	Randy J. Pritzker	35,986	Robert E. Rigby, Jr.	41,316	Alan W. Steele	45,128
Lawrence M. Green	29,384	Richard F. Giunta	36,149	Robert A. Skirvanek, Jr.	40,886	Daniel P. McLoughlin	46,066
Steven J. Henry	27,900	Douglas R. Wolf	36,971	Robert M. Abrahamsen	37,482	Robert H. Walat	46,324
Edward R. Gales	31,616	Elizabeth R. Plumer	36,637	Alan B. Sher	42,147	Thomas G. Field	45,596
Therese A. Hendricks	30,389	Timothy J. Oyer	36,628	Edward J. Russavage	43,069	Michael J. Pomianek	46,190
William R. McClellan	29,409	John N. Anastasi	37,765	William G. Gosz	27,787	M. Brad Lawrence	P47,210
Ronald J. Krandsdorf	20,004	Helen C. Lockhart	39,248	Neil P. Ferraro	39,188	Theodore E. Galanthy	24,122
M. Lawrence Oliverio	30,915	James M. Hariffin, Jr.	37,929	Lisa E. Winsor	44,405	Lisa K. Jorgenson	34,845
Jason M. Honeyman	31,624	Christopher S. Schultz	39,039	Mark Steinberg	40,829	Robert D. McCutcheon	38,717
James H. Morris	34,681						

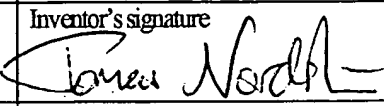
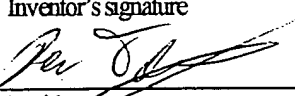
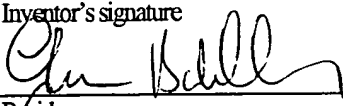
Adresser toute correspondance à: Send correspondence to:
James H. Morris
Wolf, Greenfield & Sacks, P.C.,
Federal Reserve Plaza
600 Atlantic Avenue, Boston, MA 02210-2211(USA)

Adresser tout appel téléphonique à: Direct Telephone Calls to: (name and telephone number)
(Nom et numéro de téléphone) James H. Morris
(617) 720-3500

Nom complet de l'unique ou premier inventeur	Full name of sole or first inventor
	SJÖBERG Frank
Signature de l'inventeur Date	Inventor's signature Date
	Frank Sjöberg 2000-10-02
Domicile	Residence
	S-977 51 LULEÅ, SWEDEN
Nationalité	Citizenship
	Swedish
Adresse Postale	Post Office Address
	Forskarvägen 31 A
Nom complet du second co-inventeur, le cas échéant	Full name of second or joint inventor
	WILSON Sarah Kate
Signature de l'inventeur Date	Inventor's signature Date
	Sarah Kate Wilson 11/21/2000
Domicile	Residence
	500 7 th Ave S-977 51 LULEÅ, SWEDEN Menlo Park, CA 94025
Nationalité	Citizenship
	Swedish U.S.
Adresse Postale	Post Office Address
	Professorsvägen 10

French Language Declaration			
Nom complet du second co-inventeur, le cas échéant		Full name of second or joint inventor NILSSON Rickard	
Signature de l'inventeur	Date	Inventor's signature	Date
		Rickard Nilsson	2000-10-02
Domicile		Residence S-973 32 LULEÅ, SWEDEN	
Nationalité		Citizenship Swedish	
Adresse Postale		Post Office Address Lingonstigen 30	
Nom complet de l'unique ou premier inventeur		Full name of sole or first inventor BENGTISSON Daniel	
Signature de l'inventeur	Date	Inventor's signature	Date
		Daniel Bengtsson	2000-10-02
Domicile		Residence S-971 53 LULEÅ, SWEDEN	
Nationalité		Citizenship Swedish	
Adresse Postale		Post Office Address Forskarvägen 36 A	
Nom complet du second co-inventeur, le cas échéant		Full name of second or joint inventor ISAKSSON Mikael	
Signature de l'inventeur	Date	Inventor's signature	Date
		Mikael Isaksson	2000-10-02
Domicile		Residence S-973 42 LULEÅ, SWEDEN	
Nationalité		Citizenship Swedish	
Adresse Postale		Post Office Address Borgmästarevägen 7	
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French Language Declaration			
Nom complet de l'unique ou premier inventeur		Full name of sole or first inventor NORDSTRÖM Tomas	
Signature de l'inventeur	Date	Inventor's signature	Date
			2000-10-11
Domicile		Residence S-977 53 LULEÅ, SWEDEN	
Nationalité		Citizenship Swedish	
Adresse Postale		Post Office Address Praktikantvägen 8	
Nom complet du second co-inventeur, le cas échéant		Full name of second or joint inventor ÖDLING Per	
Signature de l'inventeur	Date	Inventor's signature	Date
			2000-10-09
Domicile		Residence S-977 51 LULEÅ, SWEDEN	
Nationalité		Citizenship Swedish	
Adresse Postale		Post Office Address Professorsvägen 109 B	
Nom complet du second co-inventeur, le cas échéant		Full name of second or joint inventor BAHLENBERG Gunnar	
Signature de l'inventeur	Date	Inventor's signature	Date
			2000-10-02
Domicile		Residence S-976 32 LULEÅ, SWEDEN	
Nationalité		Citizenship Swedish	
Adresse Postale		Post Office Address Blidvägen 234	
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French Language Declaration			
Nom complet du second co-inventeur, le cas échéant		Full name of second or joint inventor JOHANSSON Magnus	
Signature de l'inventeur	Date	Inventor's signature	Date
		<i>Magnus Johansson</i>	2000-10-02
Domicile		Residence S-972 41 LULEÅ, SWEDEN	
Nationalité		Citizenship Swedish	
Adresse Postale		Post Office Address Timmermansgatan 34	
Nom complet du second co-inventeur, le cas échéant		Full name of second or joint inventor OLSSON Lennart	
Signature de l'inventeur	Date	Inventor's signature	Date
		<i>Lennart Olsson</i>	2000-10-02
Domicile		Residence S-973 31 LULEÅ, SWEDEN	
Nationalité		Citizenship Swedish	
Adresse Postale		Post Office Address Majvägen 39	
Nom complet du second co-inventeur, le cas échéant		Full name of second or joint inventor ÖKVIST Sven-Göran	
Signature de l'inventeur	Date	Inventor's signature	Date
		<i>Sven-Göran Ökvist</i>	2000-10-02
Domicile		Residence S-974 41 LULEÅ, SWEDEN	
Nationalité		Citizenship Swedish	
Adresse Postale		Post Office Address Hagaplan 7	
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